UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 2 5 2008

REPLY TO THE ATTENTION OF:

(AE-17J)

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Kenneth Mentzel
Manager, Environmental Control
U.S. Steel Corporation – Gary Works
One North Broadway
Gary, Indiana 46402

Dear Mr. Mentzel:

This is to advise you that the U.S. Environmental Protection Agency has determined that the U.S. Steel Corporation – Gary Works' facility located at One North Broadway, Gary, Indiana (U.S. Steel or facility) is in violation of the Clean Air Act (CAA) and associated federal, state, and local pollution control requirements. A Notice of Violation and Finding of Violation (NOV/FOV) for these violations is being issued and is enclosed for your review.

EPA performed an inspection covering all environmental media in May of 2007 and subsequently issued requests for information to U.S. Steel. Based on the May 2007 inspection and U.S. Steel's responses to the information requests, EPA finds that U.S. Steel failed to: (1) properly control air emissions from its coke ovens, blast furnace casthouses, flares, basic oxygen furnace shops, slag pits, steel pickling operations, and hot metal transfer cars; (2) secure proper air emission permits for its equipment and install controls; and (3) keep records in accordance with the CAA and its implementing regulations.

Specifically, EPA finds that U.S. Steel has violated the National Emission Standards for Hazardous Air Pollutants, New Source Review, the Indiana State Implementation Plan, and its Title V permit T089-7663-00121, which was issued on August 18, 2006.

The purpose of these requirements is to reduce emissions that can compromise public health and welfare. Specifically, these requirements ensure that volatile organic compounds and hazardous air pollutants are being controlled to reduce the potential harm to the human respiratory system and reduce the risk of cancer.

Section 113 of the CAA gives EPA several enforcement options to resolve these violations, including: issuing an administrative compliance order, issuing an administrative penalty order, bringing a judicial civil action, and bringing a judicial criminal action.

We are offering you the opportunity to request a conference with us about the violations alleged in the NOV/FOV. A conference should be requested within 10 days following receipt of this notice. A conference should be held within 30 days following receipt of this notice. This conference will provide you a chance to present information on the identified violations, any efforts you have taken to comply and the steps you will take to prevent future violations. Please plan for your facility's technical and management personnel to take part in these discussions. You may have an attorney represent and accompany you at this conference.

EPA contacts in this matter are Brian Dickens, Monica Onyszko, and Constantinos Loukeris. If you wish to request a conference, you may call them at (312) 886-6073, (312) 353-5139, and (312) 353-6198, respectively. EPA hopes this NOV/FOV will encourage U.S. Steel to comply with the requirements of the CAA.

Sincerely,

Linda Holt

for Cheryl L. Newton
Acting Director
Air and Radiation Division

Enclosure

cc: Craig Henry, Chief
Office of Enforcement, Air Section
Indiana Department of Environmental Management

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	
U.S. Steel Corporation – Gary Works Gary, Indiana	)	**NOTICE OF VIOLATION and FINDING OF VIOLATION**
	)	
	)	**EPA-5-08-20-IN**
Proceedings Pursuant to the Clean Air Act, 42 U.S.C. §§ 7401 et seq.	)	

NOTICE AND FINDING OF VIOLATION

U.S. Steel Corporation – Gary Works (you or U.S. Steel) owns and operates an integrated iron and steel facility located at One North Broadway, Gary, Indiana (facility). U.S. Steel owns and operates blast furnaces, basic oxygen process (BOP) furnaces, coke ovens, steel pickling lines and other operations at the facility.

EPA is sending this Notice of Violation and Finding of Violation (NOV/FOV) to notify you that we have found that U.S. Steel has violated the following provisions related to the Clean Air Act (the Act or CAA): New Source Review; National Emission Standards for Hazardous Air Pollutants (NESHAP); Title V; Indiana State Implementation Plant (SIP); and Indiana Title V Permit Program.

Statutory and Regulatory Authority

1. The CAA requires the promulgation of Primary and Secondary National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. To attain and maintain these standards, each state is required to develop a state implementation plan. The Indiana SIP includes the following requirements:

   a) Pursuant to IAC 5-1-2, visible emissions from sources in Lake County, Indiana, including blast furnaces and their casthouses, are limited to twenty percent (20%) opacity on a six-minute average.

   b) Pursuant to IAC 6.8-10-3-6, visible emissions from interplant transfer of product are limited to zero percent (0%) opacity.

c) Pursuant to 326 IAC 6.8-3-4, visible emissions from the Basic Oxygen Process (BOP) and Q-BOP Shop roof monitors are limited to twenty percent (20%) opacity on a three-minute average.

d) Pursuant to 326 IAC 6.8-3-4, visible emissions from the BOP Shop gas cleaning system are limited to twenty percent (20%) opacity on a six-minute average.

e) Pursuant to IAC 6.8-10-3-4, visible emissions from slag pits are limited to ten percent (10%) opacity on a three-minute average.

f) Pursuant to IAC 6.8-10-3-7(D), visible emissions from slag skimming exiting the Q-BOP shop arc limited to zero percent (0%) opacity.

g) Pursuant to IAC 6.8-10-3-7(D), visible emissions from Nos. 4, 6, and 8 blast furnace casthouse enclosures are limited to zero percent (0%) opacity.

h) Pursuant to 326 IAC 6.8-9-3(a)(1), visible emissions from the observed coke oven doors on any coke oven battery are limited to ten percent (10%) opacity.

i) Pursuant to 326 IAC 6.8-9-3(a)(3), the emissions from the pushing operations shall comply with the following: (1) the opacity of emissions from the coke-side of an oven to be pushed, before the first movement of the coke from the oven to the coke car begins, shall not exceed twenty percent (20%) and (2) the opacity of emissions during the pushing operation shall not exceed twenty percent (20%). The pushing shall be considered to begin with the first movement of coke from the oven into the coke car and to end when the quench car enters the quench tower. The opacity shall be determined using 40 C.F.R. 60, Appendix A, Method 9, except that the readings shall be taken at fifteen (15) second intervals. Six (6) consecutive readings shall be averaged to determine the opacity. The observer shall only use those backgrounds that are above the elevation of the battery surface. If this condition cannot be met for six (6) consecutive readings, then the opacity shall be determined using the lesser number of consecutive readings.

j) Pursuant to 326 IAC 6.8-9-3(a)(5), no visible emissions shall be permitted from more than five percent (5%) of the total Offtake piping on any coke oven battery.

k) Pursuant to 326 IAC 11-3-2(d), visible emissions from the total Offtake piping on any coke oven battery are limited to five percent (5%) opacity.

l) Pursuant to 326 IAC 11-3-2(f), visible emissions from the total coke oven doors on any coke oven battery are limited to ten percent (10%) opacity.

2. Section 110(a)(2) and Parts C and D of Title I of the CAA require preconstruction review and permitting for modification of stationary sources. Pursuant to applicable regulations, if a major stationary source is planning to make one or more major modification, then that source must obtain either a Prevention of Significant Deterioration to air quality (PSD) permit or a non-attainment New Source Review permit, depending on whether the source is located in an

attainment or non-attainment area for the pollutant being increased above its specified significance level. Specifically, these requirements are found under 42 U.S.C. § 7470-7492 and 40 C.F.R. § 52.21. In the Indiana SIP, the current PSD and non-attainment NSR provisions can be found at 326 IAC 2-2 and 2-3, respectively. The Indiana SIP non-attainment NSR provisions were previously codified in APC-19. Based on modified definitions approved by EPA on November 5, 1981, 46 Fed. Reg. 54941, APC-19 was approved on February 16, 1982, 47 Fed. Reg. 5621. Prior to federal approval of 326 IAC 2-2, EPA delegated PSD authority to the State. Specifically, 40 C.F.R. § 52.21 was incorporated into the Indiana SIP pursuant to 40 C.F.R. § 52.793.

3. Section 112(b) of the CAA established a list of hazardous air pollutants (HAPs) and provided that EPA shall add to the list additional pollutants that may present a threat of adverse human health effects through inhalation or other routes of exposure. Section 112(d) provides that EPA shall promulgate regulations establishing emission standards for each category or subcategory of major sources and area sources of listed HAPs.

   a) On May 20, 2003, EPA promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Integrated Iron and Steel Manufacturing, 40 C.F.R. Part 63, Subpart FFFFF. The purpose of these standards is to reduce, on a national scale, emission of chemicals that possess carcinogenic or toxic characteristics. These regulations include the following requirements:

      i) Pursuant to 40 C.F.R. Part 63, Subpart FFFFF, visible emissions from #4 blast furnace are limited to twenty percent (20%) opacity on a six-minute average.

      ii) Pursuant to 40 C.F.R. Part 63, Subpart FFFFF, visible emissions at BOP roof monitors are limited to twenty percent (20%) opacity on a three-minute average.

      iii) Pursuant to 40 C.F.R. Part 63, Subpart FFFFF, a source must develop an Operation and Maintenance Plan for each control system or control device. This plan must set a limit for critical equipment parameters, such as collection system damper position.

   b) On June 22, 1999, EPA promulgated the NESHAP for Hydrochloric Acid (HCl) Process Facilities and HCl Regeneration Plants. Pursuant to 40 C.F.R. Part 63, Subpart CCC, specifically 40 C.F.R. § 63.1157(a)(1) and (2), HCl concentrations are limited to 18 parts per million by volume (ppmv) or the HCl mass emission rate is limited to that which corresponds to a collection efficiency of at least ninety seven percent (97%) at the pickling lines.

   c) On September 14, 1989, EPA promulgated the NESHAP for Benzene Emission from Coke By-product Recovery Plants, 40 C.F.R. Part 61, Subpart L. The purpose of these standards is to reduce, on a national scale, benzene emissions. Pursuant to 40 C.F.R. Part 61.135(a), each owner or operator of equipment in benzene service shall comply with the requirements of 40 C.F.R. Part 61, Subpart V.

d) On June 6, 1984, EPA promulgated the NESHAP for Equipment Leaks (Fugitive Emission Sources), 40 C.F.R. Part 61, Subpart V. The purpose of these standards is to reduce, on a national scale, fugitive HAP emissions. These regulations include the following requirements:

i) Pursuant to 40 C.F.R. Part 61.242-2(b)(1), if an instrument reading of 10,000 ppm or greater is measured for any pump, a leak is detected.

ii) Pursuant to 40 C.F.R. Part 61.242-2(b)(2), if there are indications of liquids dripping from the pump seal, a leak is detected.

iii) Pursuant to 40 C.F.R. Part 61.242-2(c)(2), a first attempt at repair shall be made no later than 5 calendar days after each pump leak is detected.

iv) 40 C.F.R. Part 61.241 defines "first attempt at repair" as taking a rapid action for the purpose of stopping or reducing leakage of organic material to atmosphere using best practices.

v) Pursuant to 40 C.F.R. Part 61.242-7(b)(1), if an instrument reading of 10,000 ppm or greater is measured for any valve, a leak is detected.

vi) Pursuant to 40 C.F.R. Part 61.242-7(d)(2), a first attempt at repair shall be made no later than 5 calendar days after each valve leak is detected.

vii) Pursuant to 40 C.F.R. Part 61.242-7(e), first attempts at repair include, but are not limited to, the following best practices where practicable:
(1) Tightening of bonnet bolts;
(2) Replacement of bonnet bolts;
(3) Tightening of packing gland nuts; and
(4) Injection of lubricant into lubricated packing.

viii) Pursuant to 40 C.F.R. Part 61.246(c), when each leak is detected as specified in §§ 61.242-2, 61.242-3, 61.242-7, 61.242-8, and 61.135, the information in this section shall be recorded in a log and shall be kept for 2 years in a readily accessible location, including repair methods applied in each attempt to repair the leak.

4. The CAA requires states to develop a major source permit program, known as the Title V permit program. EPA approved Indiana's permit program on December 4, 2001. Violations of a Title V permit are federally enforceable. U.S. Steel's Title V permit includes the following requirements:

a) Pursuant to Condition C.1(a), opacity from sources in Lake County, Indiana, including blast furnaces and their casthouses, shall not exceed an average of twenty percent (20%) in any one (1) six-minute averaging period as determined in 326 IAC 5-1-4.

b) Pursuant to Condition C.5(a)(9), visible emissions from Nos. 4, 6, and 8 blast furnace casthouse enclosures and the Q-BOP shop are limited to zero percent (0%) opacity.

c) Pursuant to Condition C.5(a)(7), visible emissions from interplant transfer of product are limited to zero percent (0%) opacity.

d) Pursuant to Condition C.5(a)(5), visible emissions from slag pits are limited to ten percent (10%) opacity on a three-minute average.

e) Pursuant to Condition D.2.4(a), visible emissions from the observed coke oven doors on any coke oven battery are limited to ten percent (10%) opacity.

f) Pursuant to Condition D.2.5(e), visible emissions from the total coke oven doors on any coke oven battery are limited to ten percent (10%) opacity.

g) Pursuant to Condition D.2.4(c), the emissions from the pushing operations shall comply with the following: (1) the opacity of emissions from the coke-side of an oven to be pushed, before the first movement of the coke from the oven to the coke car begins, shall not exceed twenty percent (20%) and (2) the opacity of emissions during the pushing operation shall not exceed twenty percent (20%). The pushing shall be considered to begin with the first movement of coke from the oven into the coke car and to end when the quench car enters the quench tower. The opacity shall be determined using 40 C.F.R. 60, Appendix A, Method 9, except that the readings shall be taken at fifteen (15) second intervals. Six (6) consecutive readings shall be averaged to determine the opacity. The observer shall only use those backgrounds that are above the elevation of the battery surface. If this condition cannot be met for six (6) consecutive readings, then the opacity shall be determined using the lesser number of consecutive readings.

h) Pursuant to Condition D.2.4(e), no visible emissions shall be permitted from more than five percent (5%) of the total Offtake piping on any coke oven battery.

i) Pursuant to Condition D.2.5(c), visible emissions from the total Offtake piping on any coke oven battery are limited to five percent (5%) opacity.

j) Pursuant to Condition D.3.2, U.S. Steel shall comply with the NEHSAP Subpart L, which requires that each owner or operator of equipment in benzene service shall comply with the requirements of 40 C.F.R. Part 61, Subpart V.

k) Pursuant to Condition D.3.3, U.S. Steel shall comply with the NEHSAP for Subpart V, which requires the facility to limit leaks from equipment.

l) Pursuant to Conditions D.6.1, D.7.1, D.8.1, and D.9.1, U.S. Steel must operate in compliance with the NESHAP Subpart FFFFF for the sinter plant, blast furnaces, BOP shop, and Q-BOP shop.

m) Pursuant to Condition D.7.9(a)(2), U.S. Steel must operate the No. 14 blast furnace casthouse control system, including control at the tap holes and iron dams, at all times the casthouse is in operation.

n) Pursuant to Condition D.7.9(b), U.S. Steel must operate the flare controlling excess blast furnace gas so that a flame is present when the blast furnace is in operation.

o) Pursuant to Condition D.8.4(b), visible emissions from the BOP Shop roof monitors are limited to twenty percent (20%) opacity on a three-minute average.

p) Pursuant to Condition D.8.4(c), visible emissions from the BOP Shop gas cleaning system are limited to twenty percent (20%) opacity on a six-minute average.

q) Pursuant to Condition D.9.4(c), visible emissions from the Q-BOP Shop roof monitors are limited to twenty percent (20%) opacity on a three-minute average.

r) Pursuant to Condition D.11.2(a) and (b), U.S. Steel must comply with the NESHSAP Subpart CCC, including limiting HCl concentrations to 18 ppmv or the HCl mass emission rate to that which corresponds to a collection efficiency of at least ninety seven percent (97%) at the pickling lines.

5. The Title V regulations at 40 C.F.R. 70.7(b) state that no source subject to Title V may operate the source except in compliance with a Title V permit. Pursuant to 40 C.F.R. 71.5, the owner or operator of a source subject to Title V must submit a permit application which includes all applicable CAA requirements.

Explanation of Violations

6. On May 14 through 18, 2007, EPA conducted an inspection at U.S. Steel – Gary Works to determine the facility's compliance status with the Clean Air Act, Resource Conservation Recovery Act, Toxic Substances Control Act, and Clean Water Act.

7. On May 14 and 15, 2007, EPA witnessed several smoking hot iron transfer railcars (bottle cars) at the facility. Visible emissions exceeding zero percent (0%) opacity from interplant transfer of product are violations of 326 IAC 6.8-10-3-6 of the Indiana SIP and Title V Permit Condition C.5(a)(7).

8. On May 17, 2007, EPA took visible emission readings at No. 8 slag pit at the facility and observed opacity of 17.5% and 16.5% on a three minute average. Visible emissions exceeding 10 percent (10%) opacity on a three minute average at slag pits are violations of 326 IAC 6.8-10-3-4 of the Indiana SIP and Title V Permit Condition C.5(a)(5).

9. On May 14, 2007, EPA observed visible emissions from slag skimming exiting the Q-BOP Shop. Visible emissions exceeding zero percent (0%) opacity from slag skimming exiting the Q-BOP Shop is a violation of 326 IAC 6.8-10-3-7(D) of the Indiana SIP and Title V Permit C.5(a)(9).

10. In response to an October 26, 2007, Section 114 of the CAA Information Request, U.S. Steel submitted to EPA recorded visible emission exceedances at its blast furnace casting and filling operations on the following dates and times at specified units:

Date	Time	Unit
11-12-07	11:31 – 13:12	#4 Blast Furnace
11-14-07	9:39 – 10:12	#4 Blast Furnace
11-20-07	8:37 – 12:44	#4 Blast Furance
11-21-07	7:54 – 9:01, 10:12 – 11:54	#4 Blast Furnace
11-29-07	9:35 – 14:27	#4 Blast Furnace
11-26-07	7:31 – 11:12	#4 Blast Furnace
12-04-07	11:45 – 11:48	#4 Blast Furnace
11-12-07	9:33 – 10:45	#8 Blast Furnace
11-13-07	11:47 – 13:08	#8 Blast Furnace
11-14-07	10:07 – 10:57	#8 Blast Furnace
11-19-07	8:02 – 8:03	#8 Blast Furnace
11-28-07	11:23 – 13:26	#8 Blast Furnace
12-07-07	7:19 – 7:20	#8 Blast Furnace

Visible emissions exceeding zero percent (0%) opacity from Nos. 4, 6, and 8 blast furnace casting and filling operations outside of the enclosure that surrounds the bottle car and spout are violations of 326 IAC 6.8-10-3-7(D) of the Indiana SIP and Title V Permit Condition C.5(a)(9).

11. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports and in its Environmental Incident Reports the following exceedances at its blast furnace casthouses:

Date	Time	Percent Visible Emissions
2-6-07 (#8)	8:34 – 8:40	25.4
3-14-07 (#14)	12:46 – 12:58	21.2, 34.2
8-21-07(#8)	11:50 – 11:56	21.5
8-28-07(#6)	9:20 – 9:22	21.7
10-3-07(#8)	1:02 – 1:09	22.9
10-23-07(#8)	1:05 – 1:10	40.6
11-14-07(#4)	9:37- 9:48	29.6, 35.1

Visible emissions exceeding twenty percent (20%) opacity on a six-minute average from blast furnace casthouses are violations of 326 IAC 5-1-2 of the Indiana SIP, Title V Permit Condition C.1, and 40 C.F.R Part 63, Subpart FFFFF.

12. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports and in its Environmental Incident Reports the following exceedances at its blast furnaces:

Date	Percent Visible Emissions	Unit
09-26-06	>20	#4 Blast Furnace
09-29-06	>20	#6 Blast Furnace

Visible emissions exceeding twenty percent (20%) opacity on a six-minute average from the blast furnaces are violations of 326 IAC 5-1-2 of the Indiana SIP, Title V Permit Condition C.1, and 40 C.F.R Part 63, Subpart FFFFF.

13. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports and in its Environmental Incident Reports the following exceedances at its BOP Shop roof monitors:

Date	Time	Percent Visible Emissions
12-12-06	11:28 – 11:30	21.67
12-19-06	8:05 – 8:08	21.7
12-27-06	11:28 – 11:33	21.7, 32.9
02-12-07	8:24 – 8:27	22.08
02-23-07	11:24 – 11:27	20.8
04-10-07	7:59 – 8:02	20.42
04-10-07	8:02 – 8:05	92.08
04-10-07	8:05 – 8:08	45.83
10-15-07	8:13 – 8:16	24.2

Visible emission exceeding twenty percent (20%) opacity on a three-minute average from the BOP Shop roof monitors are violations of 326 IAC 6.8-3-4 of the Indiana SIP, Title V Permit Condition D.8.4(b), and 40 C.F.R Part 63, Subpart FFFFF.

14. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports and in its Environmental Incident Reports the following exceedances at its Q-BOP Shop roof monitors:

Date	Time	Percent Visible Emissions
11-09-06	12:53 – 12:55	20.83
01-15-07	9:01 – 9:04	21.66
11-22-07	11:30 – 11:33	22.08

Visible emission exceeding twenty percent (20%) opacity on a three-minute average from the Q-BOP Shop roof monitors are violations of 326 IAC 6.8-3-4 of the Indiana SIP, Title V Permit Condition D.9.4(c), and 40 C.F.R Part 63, Subpart FFFFF.

15. During the May 2007 inspection, EPA took visible emission readings and observed the following opacity exceedance at the BOP Shop north gas cleaner stack:

Date	Time	Percent Visible Emissions
05-18-07	10:14 – 10:20	32.5

Visible emissions exceeding twenty percent (20%) opacity on a six-minute average from the BOP Shop north gas cleaner stack is a violation of 326 IAC 6.8-3-4 of the Indiana SIP and Title V Permit Condition D.8.4(c).

16. U.S. Steel's Operations and Maintenance Plans, developed pursuant to 40 C.F.R. Part 63, Subpart FFFFF, do not contain operating parameter limits, including damper position parameters, at which the No. 14 blast furnace and BOP and Q-BOP Shop capture systems must operate. Failing to set damper position parameter limits is a violation of 40 C.F.R. § 63.7800(b)(3)(ii) and Title V Permit Conditions D.7.1, D.8.1, and D.9.1.

17. In response to a December 7, 2007, Section 114 of the CAA Information Request, U.S. Steel provided stack test reports for the 84" north continuous pickle line demonstrating the following exceedances:

Stack Test Date	HCl Concentration (ppmv)
09-13-05	62.1
10-06-05	104.2

HCl concentrations exceeding 18 ppmv at the 84" north continuous pickle line are violations of the NESHAP for HCl Process Facilities and HCl Regeneration Plants at 40 C.F.R. § 63.1157(a)(1) and Title V Permit Condition D.11.2(a).

18. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports the following coke oven door leak opacity exceedances:

Date	Percent Doors Leak	Coke Oven Unit
08-25-06	12.00	-
10-05-06	21.70	-
11-06-06	11.11	-
02-28-07	11.54	-
05-08-07	11.04	#7
07-10-07	10.14	#7
07-11-07	11.76	#7
07-26-07	10.71	#5
08-13-07	13.77	#5
10-19-07	11.03	#5

Visible emissions exceeding ten percent (10%) opacity from coke oven door leaks are violations of 326 IAC 6.8-9-3(a)(1) of the Indiana SIP and Title V Permit Condition D.2.4(a).

19. Based on EPA's observation of visible emissions during the pushing operations on the No. 5. coke battery and U.S. Steel's Quarterly Deviation and Compliance Monitoring Reports, the facility had the following opacity exceedances:

Date	Percent Visible Emission	Coke Oven Unit
10-30-06	Self Reported Exceedance	-
11-20-06	Self Reported Exceedance	-
01-23-07	Self Reported Exceedance	-
01-24-07	Self Reported Exceedance	-
03-26-07	Self Reported Exceedance	-
03-27-07	Self Reported Exceedance	-
05-13-07	32.50	#5
05-15-07	21.67	#5
06-28-07	25.83	#5
07-11-07	21.67	#2
07-11-07	34.16	#2
07-11-07	25.00	#2
07-11-07	36.67	#2
07-12-07	22.50	#2
07-19-07	38.33	#7
07-22-07	45.00	#7
07-22-07	46.67	#7
09-07-07	31.67	#7
09-14-07	30,83	#2
11-18-07	30.00	#5

Visible emissions exceeding twenty percent (20%) opacity during the pushing operations on the No. 5. coke battery are violations of 326 IAC 6.8-9-3(a)(3) of the Indiana SIP and Title V Permit Condition D.2.4(c).

20. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports the following visible emissions exceedances at the coke oven Offtake piping:

Date	Percent Offtake Piping Visible Emissions	Coke Oven Unit
08-23-06	6.12	Self-Reported
10-17-06	6.38	-
11-09-06	5.97	-
04-27-07	6.98	#2
05-04-07	5.81	#2
07-31-07	5.95	#2
08-13-07	5.43	#2

Visible emissions exceeding five percent (5%) opacity from the coke oven Offtake piping are violations of 326 IAC 11-3-2(d) of the Indiana SIP and Title V Permit Condition D.2.5(c).

21. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports the following visible emissions exceedances at the coke processing equipment:

Date	Minutes in Violation	# of Violations
09-28-06	15	1
10-07-06	15	1
06-24-07	45	3
09-15-07	15	1
12-18-07	15	1

Visible emissions exceeding sixty percent (60%) opacity from the coke processing equipment are violations of 326 IAC 5-1-2 of the Indiana SIP and Title V Permit Conditions C.1(b) and D.2.5(i).

22. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports the following visible emissions exceedances at its No. 2 Coke Oven Battery underfire stack:

Date	Minutes in Violation	# of Violations
08-18-2006 – 09-30-2006	2556	426
10-01-2006 – 12-31-2006	5550	925
01-01-2007 – 03-31-2007	3864	644
04-01-2007 – 06-30-2007	2814	469
07-01-2007 – 09-30-2007	2574	429
10-01-2007 – 12-31-2007	2382	397

Visible emissions exceeding twenty percent (20%) opacity from the No. 2 Coke Oven Battery underfire stack are violations of 326 IAC 5-1-2 of the Indiana SIP and Title V Permit Condition 6.1(a).

23. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports the following visible emissions exceedances at its No. 5 Coke Oven Battery underfire stack:

Date	Minutes in Violation	# of Violations
08-18-2006 – 09-30-2006	2796	466
10-01-2006 – 12-31-2006	5136	856
01-01-2007 – 03-31-2007	5640	940
04-01-2007 – 06-30-2007	5862	977
07-01-2007 – 09-30-2007	6624	1104
10-01-2007 – 12-31-2007	9324	1554

Visible emissions exceeding twenty percent (20%) opacity from the No. 5 Coke Oven Battery underfire stack are violations of 326 IAC 5-1-2 of the Indiana SIP and Title V Permit Condition 6.1(a).

24. U.S. Steel self-reported in its Quarterly Deviation and Compliance Monitoring Reports the following visible emissions exceedances at its No. 7 Coke Oven Battery underfire stack:

Date	Minutes in Violation	# of Violations
08-18-2006 – 09-30-2006	2592	432

10-01-2006 – 12-31-2006	5934	989
01-01-2007 – 03-31-2007	3852	642
04-01-2007 – 06-30-2007	7626	1271
07-01-2007 – 09-30-2007	8958	1493
10-01-2007 – 12-31-2007	6594	1099

Visible emissions exceeding twenty percent (20%) opacity from the No. 7 Coke Oven Battery underfire stack are violations of 326 IAC 5-1-2 of the Indiana SIP and Title V Permit Condition 6.1(a).

25. U.S. Steel failed to apply for a major source construction permit and install Best Available Control Technology or achieve the Lowest Achievable Emission Reduction, depending on whether the area was in attainment or non-attainment, as required by APC-19 and 326 IAC 2-3 or 40 C.F.R. § 52.21 and 326 IAC 2-2 when it modified its No. 4 blast furnace in or around 1990. The increase in production resulting from changes made during this project, which included upgrading the cooling system, caused an increase in emissions that exceed "significant" levels for sulfur dioxide (SO_2), particulate matter (specifically PM_{10}), carbon monoxide (CO), and nitrogen oxides.

26. U.S. Steel failed to identify the blast furnace relief valves as an emission unit, as that term is defined in 326 IAC 2-7-1, in its Title V permit application, in violation of Title V of the CAA and 40 C.F.R. § 71.5.

27. U.S. Steel removes suction from one tap hole and iron dam when it opens another tap hole. U.S. Steel failed to utilize the No. 14 blast furnace casthouse baghouse to control emissions from No. 14 casting operations, including the No. 3 tap hole and iron dam, while the casthouse was in operation, in violation of 326 IAC 2-7-6(6) and the Title V permit at D.7.9(a)(2).

28. In response to a December 7, 2007, Section 114 of the CAA Information Request, U.S. Steel provided information demonstrating that it failed to ensure a pilot flame was always present at the blast furnace gas flares on at least 75 occasions in 2005, 216 occasions in 2006, and 118 occasions in 2007, resulting in the emission of un-combusted carbon monoxide into the atmosphere in violation of Title V Permit Condition D.7.6(6).

29. Based on EPA's review of leak records for equipment subject to 40 C.F.R. 61 Subpart V, the following table outlines the equipment that failed to have a first attempt at repair made within 5 days:

Date	First Attempt Date	Unit ID	Tag No.
3/21/05	3/31/05	Dist. Sump	-
6/1/05	6/11/05	D-6	-
6/12/06	6/19/05	T-304C	-
8/14/06	8/22/06	Dist. Sump	-
1/2/07	1/16/07	E-422	-
1/3/07	1/16/07	T-312 Valve	10141

U.S. Steel's failure to make first attempts at repair within 5 days as outlined in the above table is a violation of 40 C.F.R. § 61.242-2(c)(2) and Title V Permit Condition D.3.3.

30. Indiana Department of Environmental Management issued Title V Permit No. T089-7663-00121 to the facility on August 18, 2006. U.S. Steel failed to meet the conditions of its Title V permit as referenced in paragraphs 6 through 29, above. U.S. Steel's operation in violation of its Title V permit constitutes violations of section 502 of the CAA and of 40 C.F.R. § 70.7(b).

Environmental Impact of Violations

31. These violations have caused or can cause excess emissions of SO_2, opacity, particulate matter, CO and hazardous air pollutants.

32. Excess emissions of SO_2 increase the amount of acid rain and public exposure to unhealthy levels of SO_2. SO_2 reacts with other chemicals in the air to form tiny sulfate particles. Long term exposure to high levels of SO_2 gas and particles can cause respiratory illness, aggravate existing heart disease and lead to premature death.

33. Excess opacity increases public exposure to unhealthy particulate matter.

34. Excess emissions of PM_{10} increase public exposure to unhealthy fine particulate matter. Fine particulate matter contributes to respiratory problems, lung damage and premature deaths.

35. Excess emissions of CO increase public exposure to CO, which can enter the bloodstream reducing oxygen delivery and can aggravate cardiovascular disease.

36. Excess emissions of HCl and chlorine may produce a wide variety of human health effects including irritation of the lungs, skin and mucous membranes; dysfunction of the central nervous system; digestive and respiratory problems; and skin irritation.

37. In addition, iron and steel production is a source of carbon dioxide (CO_2) emissions. Excess CO_2 emissions have been "associated with changes in the lengths of growing seasons, the availability of water, and the incidence of disturbance regimes (extreme high temperature events, floods, droughts, fires, and pest outbreaks), which, in turn, will have important impacts on the structure and function of both natural and human-made environments."

38. In addition to its role as an ozone precursor, the hazardous air pollutant benzene presents specific health and environmental threats. Benzene is a known human carcinogen, shown to cause leukemia, to which many scientists believe there is no safe level of exposure. Other chronic effects of exposure include bone marrow depression leading to aplastic anemia, mutagenicity, fetotoxicity, decreased fertility, and possible drying and scaling of the skin. Among the acute health effects associated with benzene exposure are dizziness and lightheadedness; eye, nose and throat irritation; upset stomach and vomiting; irregular heart beat; convulsions and death. Ecological effects include death in exposed animal, bird and

fish populations and death or reduced growth rate in plant life. One of the goals of the Equipment Leaks NESHAP, 40 C.F.R. Part 61, Subpart V, is to control fugitive benzene air emissions from equipment (e.g. valves and pumps). Benzene is a highly volatile substance, with approximately 99.5% eventually evaporating into the air from other media. Regulatory and non-governmental agencies have set recommended workplace airborne exposure limits at different levels, some as low as 1 ppm not to be exceeded in any 60-minute period and 5 ppm not to be exceeded in a 10-minute period. The odor threshold for benzene is 12 ppm, which means that harmful exposure could take place well before an individual has any sensory perception of it.

6/25/08
Date

Cheryl L. Newton
Acting Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Notice of Violation and Finding of Violation, No. EPA-5-08-20-IN, by Certified Mail, Return Receipt Requested, to:

Mr. Kenneth Mentzel, Manager, Environmental Control
U.S. Steel Corporation – Gary Works
One North Broadway
Gary, Indiana 46402

I also certify that I sent copies of the Finding of Violation and Notice of Violation by first class mail to:

Craig Henry, Chief
Office of Enforcement Air Section
Indiana Department of Environmental Management
100 North Senate Avenue, Room 1001
Indianapolis, Indiana 46206-6015

on the 27th day of June, 2008.

Loretta Shaffer, Secretary
AECAS, (MN/OH)

CERTIFIED MAIL RECEIPT NUMBER: 7001 0320 0005 8919 1495